Remarks

The present invention, as defined by pending claims 1-4, is directed to processes for preparing 3,3a,6,6a-tetrahydro-2H-cyclopentan[b]furan-2-one:

which is economical, provides enantiomerically enriched product and is suitable for large-scale production.

Claims 1-4 are pending in this application. Claims 1-4 are amended herein. Basis for these amendments is found throughout the specification and Examples as originally filed. No new matter has been added. Applicants respectfully requests reconsideration and withdrawal of the outstanding objections and rejections in light of the foregoing amendments and following remarks. For the reasons that follow, Applicants believe that all claims are now in condition for allowance.

Rejection of Claims 1-4 Under 35 U.S.C. § 103(a)

The Office Action has rejected claims 1-4 under 35 U.S.C. § 103(a) as allegedly being obvious over Ogasawara et al. (EP 1 086 942). Applicant respectfully disagrees.

The present invention, as defined by claims 1-4, distinguishes over Ogasawara by claiming reaction of 3-acyl-5-hydroxycyclopentene of Formula I:

Formula I

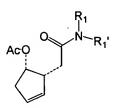
with an amide acetal of Formula IIa or a ketene aminoacetal of Formula IIb:

Formula IIa

Formula IIb

wherein R₁, R₂ and Ac are as described therein; at 90-140°C in a suitable solvent of boiling point >90°C while maintaining an alcohol R₂OH concentration of less than 3% by volume to give an acylhydroxycyclopenteneacetamide of Formula III:

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Formula III.

Ogasawara does not teach or suggest reaction of 3-acyl-5-hydroxycyclopentene with an amide acetal or ketene aminoacetal at 90-140°C in a suitable solvent of boiling point >90 °C while maintaining an alcohol R₂OH concentration of less than 3% by volume. Nor does this reference teach or suggest the surprising result that rearrangement under these reaction conditions minimizes racemization of the starting 3-acyl-5-hydroxycyclopentene. As shown in Chart 1 of the instant specification, maintaining concentrations of alcohol R₂OH, i.e., % methanol in toluene (v/v), less than 3% in the rearrangement, minimizes racemization of the starting 3-acyl-5hydroxycyclopentene. In contrast, concentrations of alcohol R2OH greater than 3-5% leads to extensive racemization of 3-acyl-5-hydroxycyclopentene (see page 3, line 17 to page 4, line 8). The cited reference does not teach or suggest any reaction conditions for this rearrangement that minimizes racemization of the starting 3-acyl-5-hydroxycyclopentene. Absent a teaching or suggestion in the prior art, one of skill in the art would not have been motivated to use the reaction conditions to minimize racemization of the starting hydroxycyclopentene. Thus, claims 1-4 are not obvious over the cited reference.

Conclusion

Applicants believe that all claims are now in condition for allowance. Should there be any issues that have not been addressed to the Examiner's satisfaction, Applicants invite the Examiner to contact the undersigned attorney.

If any fees are due in connection with this response, including the fee for any required extension of time (for which Applicants hereby petition), please charge such fees to Deposit Account No. 500329.

Date: Jubuary 15, 2005

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Respectfully submitted,

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